Troubleshooting Flowchart — Mainshaft Speed Sensor

- **OBD-II Scan Tool indicates Code P0715.**
- **Self-diagnosis D4 indicator light blinks fifteen times.**

Possible Cause

- **Disconnected mainshaft speed sensor connector**
- **Short or open in mainshaft speed sensor wire**
- **Faulty mainshaft speed sensor**

NOTE: Code P0715 (15) on the PCM doesn't always mean there's an electrical problem in the mainshaft or countershaft speed sensor circuit; code P0715 (15) may also indicate a mechanical problem in the transmission.

Check the mainshaft and countershaft speed sensor installation.

Are the mainshaft and countershaft speed sensor installed properly?

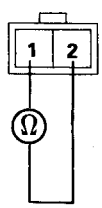
NO → **Reinstall and recheck.**

YES

Measure Mainshaft Speed Sensor Resistance at the Sensor Connector:

1. Disconnect the 2P connector from the mainshaft speed sensor connector.
2. Measure the resistance of the mainshaft speed sensor.

MAINSHAFT SPEED SENSOR CONNECTOR



TERMINAL SIDE OF MALE TERMINALS

Is the resistance 400 - 600 Ω?

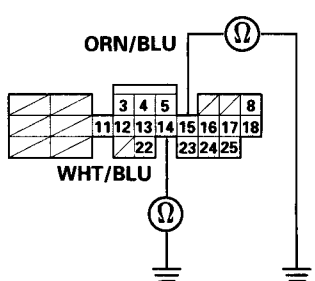
NO → **Replace the mainshaft speed sensor.**

YES

Check Mainshaft Speed Sensor for a Short Circuit:

1. Disconnect the B (25P) connector from the PCM.
2. Check for continuity between body ground and B15 terminal and the B14 terminal individually.

PCM CONNECTOR B (25P)



WIRE SIDE OF FEMALE TERMINALS

Is there continuity?

YES → **Repair short in the wires between the B15 and B14 terminals and the mainshaft speed sensor.**

NO

To page 14-70

(cont'd)

Electrical Troubleshooting

Troubleshooting Flowchart — Mainshaft Speed Sensor (cont'd)

From page 14-69

Measure Mainshaft Speed Sensor Resistance:
1. Connect the mainshaft speed sensor 2P connector.
2. Measure the resistance between the B15 and B14 terminals.

Is the resistance 400 - 600 Ω?

YES → **Run the Electrical Troubleshooting Flowchart for code P0720 (code 9). Check for loose PCM connectors. If necessary, substitute a known-good PCM and recheck.**

NO

Check NM Wire Continuity:
1. Disconnect the 2P connector from the mainshaft speed sensor connector.
2. Check for continuity between the B15 terminal and the No. 1 terminal of the mainshaft speed sensor connector.

Is there continuity?

NO → **Repair open in the wire between the B15 terminal and the mainshaft speed sensor.**

YES

Check NMSG Wire Continuity:
Check for continuity between the B14 terminal and the No. 2 terminal of the mainshaft speed sensor connector.

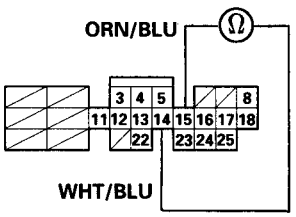
Is there continuity?

NO → **Repair open in the wire between the B14 terminal and the mainshaft speed sensor.**

YES

Check for loose PCM connectors. If necessary, substitute a known-good PCM and recheck.

PCM CONNECTOR B (25P)



WIRE SIDE OF FEMALE TERMINALS

MAINSHAFT SPEED SENSOR CONNECTOR